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Asbestos in Schools:
Inspection and Abatement

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AASA
LEADERSHIP
FOR LEARNING

The problem of asbestos in schools first came to the attention of the general public in the late 1970s, although the scientific community was aware of the problems in the 1930s. Material that had been flaking off the walls and ceilings in several school districts was found to contain asbestos. Reaction ranged from hysteria to calm planning. Schools were closed in some districts; in others, teachers refused to teach inside after asbestos had been discovered.

Asbestos was used for insulative and decorative purposes from the end of World War II until 1973, when its use in most applications was banned. Asbestos possesses high tensile strength, good thermal, acoustical and electrical insulating properties, and moderate-to-good chemical resistance. Because of these qualities, it was used in many buildings. It was sprayed onto steel structural beams as a protection against warping during a fire. It was sprayed onto walls and ceilings as acoustical insulation and was wrapped around pipes to prevent heat loss and sweating.

Sprayed- or trowelled-on asbestos is easily damaged. It is usually of low density and is friable, i.e., it can be dented or crumbled with slight finger pressure. Normal school activities and vandalism both contribute to the separation of these types of materials from the surface to which they are applied. Once the fibers are released, they are very difficult to eliminate. Sweeping simply places them back into the atmosphere, and even wet mopping is not completely effective in preventing this hazard. If the asbestos is damaged in any way, normal activities will increase the damage and release even more fibers into the air. These activities can be as seemingly harmless as a hand brushing against an asbestos-coated surface.

Asbestos is a powerful carcinogen, the effects of which usually take 20 to 30 years or more to become evident. It is the cause of a rare cancer of the chest lining as well as of lung cancer. It can also cause a disease known as asbestosis. The fibers lodge in the lungs, causing scarring that greatly reduces lung capacity in a way similar to emphysema.

There are currently no standards set for safe exposure levels in schools. The only existing regulations affect factory workers. The workers, however, have the advantage of protective clothing and filtering devices, which are not available to the students, teachers, or staff in a school building that has an asbestos problem.

There are several ways to deal with asbestos. The most effective, but also the most expensive, is removal. The asbestos-containing material must first be wet with a wetting agent and then removed. Ordinary water is not at all effective in preventing the release of fibers into the air during the removal process. Depending on the composition of the asbestos-containing material in question, the ease of this removal varies. Some asbestos plasters are so hard that they can only be completely removed with a hammer and chisel. The area in which the removal takes place must be sealed off, usually with plastic sheeting; and disposable work clothing, respiratory filters, locker rooms and showers must be provided for the workers involved in the removal in order to prevent the contamination of other areas of the building. The asbestos that is removed, as well as the filters and work clothing, must then be disposed of at a site approved for hazardous waste, usually after being encased in plastic bags. This option is obviously the most effective, as it totally eliminates any possibility of further contamination in the building from which the

asbestos has been removed. However, it is also quite involved and expensive. When undertaken with proper precautions, removal is often far beyond the financial capability of the local district. When these safety measures are totally ignored, removal often creates a greater hazard than would have been posed by simply leaving the materials in place. Unfortunately, many school districts which cannot afford to pay the cost of removal by a qualified firm attempt to complete it themselves. Very few schools have the trained personnel or equipment that is necessary for removal. Removal also makes it necessary to replace the material that has been removed. The fireproofing and insulation qualities of asbestos often make its replacement almost as costly as removal itself.

Encapsulation is, in many cases, a less effective way of dealing with asbestos than is removal. To encapsulate, a coating is applied over the asbestos-containing material which, at least in theory, prevents the further release of fibers into the atmosphere. The effectiveness of encapsulation varies with the type of material to which the encapsulant has been applied. An asbestos plaster, which has high density and is well bonded to the surface behind or beneath it, is an example of a surface that can be successfully encapsulated. Its hardness makes damage to the encapsulating material extremely unlikely. The location of the material to be encapsulated also affects the feasibility of this method. If it is in an area that is not easily accessible, such as a high ceiling, encapsulation is much more likely to be effective than it is on a wall or pipe wrapping which is within easy reach and, therefore, likely to sustain damage. A soft asbestos-containing material is also an inappropriate candidate for encapsulation. Because of its softness, it can be easily dented. The encapsulation around the dent may crack or flake as a result of this pressure, causing fibers to be released into the air.

A third method of asbestos abatement is enclosure. For those places in buildings that can be sealed off, enclosure is an effective alternative. However, most buildings have very few places that can be sealed off entirely or can be closed to future entry on a regular basis.

Both encapsulation and enclosure present another problem. No matter how effective the initial action may be, or how well the original job was done, the asbestos remains as a part of the structure of the building. If, at some later date, the building is renovated or torn down, the potential for the release of fibers into the air is again a consideration. The removal of asbestos that previously has been encapsulated or enclosed can be a costly and hazardous procedure.

Because few people seem to know what exactly should be done about asbestos, the approaches to abatement vary widely. Removal procedures range from simply removing the offending materials and throwing them away to million-dollar undertakings performed by outside contractors, which sometimes requires the closing of the building in question until the project is completed. Encapsulation varies from simply painting over a suspect surface to trowelling specially formulated plasters over asbestos that has been treated with a

penetrating agent to aid adhesion of the encapsulating material. As the procedures vary, so does the effectiveness of the method. Removing or encapsulating asbestos-containing materials improperly is potentially more dangerous than taking no action at all, since disturbing the material in any way precipitates the release of fibers into the atmosphere. Some districts do not have the money for removal and must encapsulate instead. Some districts try to remove the asbestos at less expense and do more damage than good. Encapsulation and enclosure are in most circumstances not permanent measures. The only real solution is the removal of asbestos-containing materials. As long as asbestos remains in a building, there is a potential hazard, which may be activated by damage to the surface of the material, ordinary wear and tear, remodeling or demolishing the building.

Legislative History

In 1980, funds were authorized for the detection and removal of hazardous asbestos hazards from schools. If a school finds asbestos it is required to notify the parents through the PTA or a similar organization. The school is also required to post warnings with instructions for the handling of the material for their maintenance personnel and to keep records of the subsequent condition and/or treatment of the asbestos-containing material. There is no requirement that a school district take any action except inspection and record-keeping. Although funds for the loan program were never appropriated, the schools were subject to regulations which require them to inspect for asbestos in their buildings.

Until very recently there has been little federal involvement in any action beyond the regulation, local school districts are on their own in removing asbestos unless they happen to be located in one of the 10 states which have some form of program for the removal of asbestos from schools. Even in the inspection process, a federal inspector was assigned to each region of the country, about one for every 10 states. This inspector is theoretically available to inspect the buildings of any school district that requests his help, but the sheer area of a region and number of school facilities leaves the chance of a school district being inspected by the federal inspector at slim to none.

New asbestos legislation has been passed by both houses as Title V of P.L. 98-377 and the president has signed the bill. P.L. 1310 authorizes 50 million dollars for the removal of asbestos from schools, but, as the cost of removing asbestos in one building is frequently over $50,000, this money, although helpful, will not begin to solve asbestos problems in the schools. There are about 85,000 school sites, many with multiple facilities as well as numerous other school facilities that are used for storage, maintenance, administration or athletics. There is also an unknown but large number of private school facilities. Both AASA and EPA have done surveys to get some notion of how prevalent and expensive hazardous asbestos is in schools, but there is not actual data defining the problem and the probable cost of abatement. Based on both EPA and AASA findings the problem is large and much more expensive than anyone seems willing to acknowledge.

About 77 percent of a school district's budget goes for staff salaries and benefits. Another 13 to 14 percent goes for maintaining, operating, heating and cooling buildings and about 5 percent goes for transportation, which leaves little flexibility in a school's budget for large expenditures. A district that discovers asbestos in any significant quantity in its buildings has very few places in such a fixed budget to look for funding. Other maintenance may have to be deferred, or teaching materials may have to be passed up in order to abate the asbestos in schools, unless some outside source of funding is made available. Until the money is found, the asbestos remains in the buildings, a potential health hazard to anyone -- student, teacher or staff -- who occupies it.

Survey Approach

The survey is based on a random sample of 2,600 school districts. The survey and a cover letter were mailed to the superintendent of each school district with a request for prompt action on the survey. AASA received 1,235 responses for a response rate of 47.5 percent. Because slightly more than one-half of the sample did not respond, the results should be interpreted cautiously when making inferences about the total population of school districts.

Survey Results

The survey sought answers to six basic questions regarding the actions of school districts regarding the identification and abatement of asbestos. Further, the survey sought to open the questions of how the cost of asbestos abatement impacted school budgets. The questions the survey sought to answer were:

1. Have school facilities been inspected for hazardous asbestos?

2. By whom were school facilities inspected?

3. How many school districts reported finding hazardous asbestos in school facilities?

4. What type of action was taken to abate hazardous asbestos when it was found in the responding schools?

5. What costs did school districts incur to abate hazardous asbestos?

6. Did the school districts receive any outside financial assistance for abatement of friable asbestos?

Question 1: Have school facilities been inspected for hazardous asbestos?

Over 97 percent (97.5 percent), or 1,210 of the 1,235 respondents had inspected school facilities. A recent survey of school districts by the Environmental Protection Agency (EPA) found that 66 percent of the responding school districts had not fully complied with the inspection requirements set by EPA in 1982. Because AASA did not ask about compliance with EPA guidelines, either most of the nonrespondents (52.5 percent of the sample) had not complied with EPA regulations or many of the school districts which responded to the AASA survey have only partially complied with the regulations. However, it appears that unless all of the nonresponding school districts had not inspected for asbestos that the number of school districts that had not inspected for hazardous asbestos would be closer to one-third than one-half.

Full compliance with EPA regulations involves the following steps:

1. Inspect all areas of each school building within the agency for friable materials applied to structural surfaces in the building;

2. Take at least three samples of each distinct type of friable material found or treat all friable materials as asbestos-containing;

3. Have those samples analyzed using polarized light microscopy (PLM) for their asbestos content;

4. Post notice of inspection results in schools where friable asbestos-containing materials were found using Form 7730-3, "Notice to School Employees," and inform all employees of the location of these materials;

5. Distribute Form 7730-2, "A Guide for Reducing Asbestos Exposure," to maintenance and custodial personnel;

6. Notify the parent-teacher groups or parents for schools found to contain friable asbestos-containing materials; and

7. Maintain records of the findings of all inspections and analyses at the local education agency and in all schools using Form 7730-1.

Some of the steps required for full compliance are dependent on having inspected for hazardous asbestos, so the data do not completely indicate that schools have failed to inspect for friable materials. In fact, the EPA report found that 98 percent of the public schools had actually been inspected for hazardous asbestos, which is exactly what AASA found. In fact, 15.63 percent, or 193 of the respondents to the AASA survey, reported being inspected more than once.

Question 2: By whom were school facilities inspected?

This question arose from a general concern about the quality of inspections for hazardous asbestos. There is concern that the methods of inspection and subsequent analysis of material for hazardous asbestos are not all of sufficient quality to insure that hazardous asbestos would actually be detected.

Table 1 shows that the most frequent method of inspection for hazardous asbestos is through outside consultants (44.13 percent, or 545 respondents). The reliance on outside consultants is probably a reflection of three factors. First, EPA did not have the staff available to conduct many inspections; second, the school districts did not have the technical expertise to conduct the inspections themselves; and third, schools desired to obtain the best available information because of the potential hazards involved. Forty-four respondents specifically stated that they had hired architects to conduct the inspection. No other type of outside consultant was specified more than five times, so it may be that firms which built or are building schools were the most frequently sought consultants to inspect school facilities.

That state health agencies are the second most frequent source of inspection, (15.71 percent, or 194 respondents) indicates that states have been active in assisting schools in detecting hazardous asbestos. Also, another 73 respondents (5.91 percent) had been inspected by a state Occupational Safety and Health Agency (OSHA), making the total number of respondents reporting an inspection by state agencies 267, or 21.62 percent, of the respondents.

Many respondents, 158 or 12.79 percent, reported that they conducted their own inspection. The need for school districts to conduct their own inspection is perhaps the best indicator of the paucity of technical skills necessary to inspect school facilities for hazardous asbestos. Although Congress passed the original law requiring inspection for asbestos in 1980, the federal government did not provide either the guidance or the inspectors to assist schools in complying with the law. Therefore, states, localities, and private industry had to develop an inspection capability which lead to a myriad of methods of inspecting for asbestos and an uneven distribution of inspection skills.

Many school districts, 193 or 15.63 percent, reported doing more than one inspection. In most of the cases, one of the methods of inspection was self-inspection. When more than one inspection was reported, the credit for inspection went to the highest level of government listed as inspector. If a school district reported a self-inspection and an inspection by an outside consultant, the credit for the inspection was given to the outside consultant.

Table 1
Reported Inspectors of
School Facilities for Hazardous Asbestos

Inspector	Number of Respondents	Percentage
Outside Consultants	545	44.13
Architects	(44)	(3.56)
State Health Agency	194	15.71
School District Employees	158	12.79
Environmental Protection Agency	122	9.88
County Health Agency	81	6.55
State OSHA	73	5.91
State Education Agency	11	.89
City Health Agency	10	.81
Other City Agency	7	.57
No Response	9	.73
Subtotal	1,210	97.97
Not Inspected	25	2.02
Total	1,235	99.99
More Than One Inspection	193	15.63

The AASA data on inspectors of school facilities differ from the most recent EPA survey in that EPA found 49.92 percent of the respondents had an outside agency conduct the inspections. Outside agencies for the EPA report include everyone except the local education agency (LEA) and EPA. Using the EPA definition of outside agencies, 74 percent of the respondents in the AASA survey were inspected by outside agencies. This difference may be a result of the nonrespondents to the AASA survey (52.5 percent).

Question 3: How many of the responding school districts reported finding hazardous asbestos in school facilities?

62.83 percent of the responding school districts reported that some quantity of hazardous asbestos had been found in school facilities. Table 8 shows that another 32 school districts reported finding material containing asbestos, but that testing revealed that the asbestos was not hazardous.

Table 2

Results of Inspections for
Hazardous Asbestos in Responding School Districts

	Number of Respondents	Percentage
School districts reporting finding hazardous asbestos	776	62.10
School districts reporting nonhazardous asbestos	32	2.59
School districts reporting no asbestos	402	32.55
School districts with inspections in progress	10	.81
School districts not inspected	25	2.02
TOTAL	1,235	100.00

The recent EPA survey reported that 54.27 percent of the schools surveyed found friable asbestos. The difference between AASA results (62.83 percent) and EPA results might be found among the nonrespondents to the AASA survey or might be a function of when the surveys were conducted. The EPA survey was a telephone survey conducted between December 10, 1983 and February 12, 1983, while the AASA survey was done in the summer of 1984. Possibly the AASA survey respondents include more districts that found asbestos and decided to act during the summer to abate the asbestos.

Question 4: What type of action was taken to abate hazardous asbestos when it was found in the responding school districts?

Of the 1,235 respondents, 767 or 62.10 percent reported finding hazardous asbestos. Table 3 shows that 623 or 81.23 percent of the school districts reporting friable asbestos reported completing abatement of the hazard. Sixty school districts, or 7.82 percent reported that abatement was either under way or planned for the summer of 1984. Another ten school districts (1.30 percent) reported that abatement had been done partially. Thus, in all, 90.35 percent of the respondents that identified friable asbestos had acted or were acting to abate those asbestos hazards. However, 74 respondents (9.65 percent) had not acted to abate friable asbestos.

Table 3

Reporting School Districts'
Response to Identification of Friable Asbestos

	Number of Respondents	Percentage
Abatement Completed	618	80.57
Abatement Partially Complete	60	7.82
Abatement in Progress	10	1.30
Building Closed	5	.65
No Action Taken	74	9.65
TOTAL	767	100.00

The 623 responding school districts reporting that they had concluded abatement of hazardous asbestos reported four methods of abatement: removal, encapsulation, a combination of removal and encapsulation, and closing the affected buildings. Table 5 shows that encapsulation was the most frequent action reported, with 252 school districts (40.45 percent) of the respondents reporting using this method.

Table 4

Method Used by Respondents
Who Had Completed Abatement Procedures

Method of Abatement	Number of Respondents	Percentage	Percent of Total
Removal	169	27.13	13.68
Encapsulation	252	40.45	20.40
Combination of Removal and Encapsulation	197	31.62	15.95
Closing of Affected Buildings	5	.80	.40
TOTAL	623	100.00	50.43

Thus, most school districts reporting finding hazardous asbestos had acted or were preparing to act by summer 1984. Only 9.65 percent of the reporting schools districts had not acted or were not preparing to act by the summer of 1984. However, because those schools had acted to inspect for friable asbestos, action would normally be expected to follow.

Only 25 of the 1,235 responding school districts could be considered inactive in terms of potential asbestos hazards because they had not acted to at least inspect for friable asbestos.

The AASA data again differ from the EPA data on the percentage of school districts having completed abatement of friable asbestos. AASA found that 50 percent of the respondents reported completion of abatement. EPA found that 43.75 percent of their sample had completed abatement and that 7.3 percent had taken no action. Respondents to the AASA survey reported that 5.99 percent reported taking no action to abate hazardous asbestos that had been identified. The differences, although not large, could possibly be attributed to nonrespondents to the AASA survey, the timing of the survey, or sampling errors.

Question 5: What costs did school districts incur to abate hazardous asbestos?

Table 5 shows that the responding school districts reported spending $48,850,580 ($48.86 million) to abate friable asbestos. That figure is low because only 558 of the 702 school districts that had taken action or were planning to take action reported their costs. Those 558 school districts reporting cost data had asbestos in a total of 2,264 individual school facilities. The average costs of abatement per school district for removal were $128,330, and $22,703 for encapsulation. There is considerable difference in the amount of time, effort, material and labor between removal and encapsulation of hazardous materials. Table 5 breaks costs down in terms of the average cost per school district of removal or encapsulation of asbestos, and the average cost per facility.

Table 5

Reported Costs of
Removing or Encapsulating Friable Asbestos

Type of Abatement	Average Cost/ School District	Average Cost/ Building
Removal	$128,330	$39,477
Encapsulation	22,703	6,458

Type of Abatement	School Districts Reporting Costs	Number of Facilities	Total Cost
Removal	319*	1,037	$40,937,144
Encapsulation	349*	1,227	7,923,436
		2,264	$48,860,580

* 130 school districts reported costs for removal and encapsulation.

Because only 558 of the responding districts reported costs data and because 1,365 of the 2,600 school district to whom surveys were sent did not respond, it is not possible to accurately infer from the AASA survey how much asbestos abatement has cost the nation's schools or how much more money will be required to identify and abate all of the hazardous asbestos in our schools. Also, the AASA survey did not seek data on the number of school districts involved in operations/maintenance/reassessment (OMR) programs or the cost of such programs. An effective encapsulation program must include an OMR program as long as friable asbestos is in the building. Thus, costs do not end with encapsulation.

Another aspect to the costs question to which neither the EPA nor any other agency of the federal government has sought an answer is how local school districts are expected to pay for asbestos abatement or what impact

expenditures for asbestos abatement will have on the instructional program. AASA could not figure out a way to accurately measure the impact of asbestos abatement on the quality of education. However, data were sought to judge whether or not asbestos abatement expenditures were anticipated and where funds for abatement were found.

Table 6 below shows that of the 558 responding school districts that reported costs data, 538 answered the survey questions regarding whether or not the costs of asbestos abatement had been budgeted.

Table 6

Number and Percentage of
School Districts Which Had Budgeted for Asbestos Abatement

	Yes	No	Total
Number	148	390	538
Percentage	27.51	72.49	100

Most (72.49 percent) of the reporting school districts had not budgeted for asbestos abatement costs. Thus, 72.49 percent of the 558 responding school districts that reported costs data had to divert funds from other areas of the school's general operating budget. Diversion of significant amounts of funds within school budgets is not easily accomplished because school budgets are so heavily weighted toward personnel costs.

According to data from the 1983-84 school year gathered by the Education Research Service (ERS), most of a school budget is directed to salaries, wages, and fringe benefits (Table 7).

Table 7

Average Expenditures for School Districts

Current Expenditures (General Operating Budget	Expenditures	Percentage of Current Expenditures	Percentage of Total Expenditures
	$2,891.15	100	
Board of Education Services	17.21	.60	.54
Executive Administration	52.78	1.84	1.64
Central and Business Services	66.82	2.24	2.08
School Building Administration	167.09	5.84	5.24
Instructional Services	1,878.45	65.06	58.60
Health and Attendance	42.56	1.37	1.33
Transportation	147.68	5.16	4.61
Food Service	12.35	.44	.39
Student Activities	27.88	.91	.87
Maintenance and Operations	262.98	9.05	8.20
Heating and Cooling	122.84	4.36	3.83
Other Current Expenditures (Telephone, Insurance, Short-Term Interest)	97.88	3.27	3.05
Capital Expenditures	$313.97	100	9.85
- Capital Outlay	123.35	39.29	3.85
- Debt Retirement	106.40	33.89	3.32
- Interest on Debt	54.45	17.34	1.69
Salaries and Benefits as a percentage of Current Operating Budget	$2,229.00	77.25	

As the ERS data show, there is not much flexibility in the average school district's budget. For example, when the Washington D.C. schools found hazardous asbestos, the funds for abatement were taken from the maintenance and operating budgets. When needed maintenance is deferred, schools are only delaying an expenditure, and school facilities which need repair will simply deteriorate further. As the budget analysis of ERS shows, there is another way many schools can raise needed funds, and that is by taking an extra-long-term debt through a bond issue. Many school districts also have the option of going for a special tax levy. Either passing a bond issue or a tax levy takes an enormous amount of energy and many additional costs are incurred. Only about 50 percent of the proposed school bond issues have passed in the last decade.

Table 8 shows the responses of 377 school districts that reported abatement cost data and gave the sources of those funds.

Table 8

Sources of Funds for Abatement of Asbestos

	General Operating Budget	Bond Issue/ Tax Levy	Other (State or Federal	Total
Number	316	25	36	377
Percentage	83.82	6.63	9.55	100

The data in Table 8 must be viewed carefully because only 55.60 percent, or 678 schools, reported complete or partial abatement of asbestos. However, the AASA data clearly indicate that while most schools did not anticipate paying for asbestos abatement, more than eight of ten school districts took the costs of asbestos abatement out of their general operating budget -- robbing Peter to pay Paul. Very few respondents (25, or 6.63 percent) reported passing a bond issue or a tax levy, and only 36 or 9.55 reported a source of revenue other than the general fund, bond issues or tax levies.

In summary, asbestos abatement is expensive -- nearly $49 million for the sample -- and the expense is seldom planned. Thus, school districts were forced to defer other expenditures. One problem with robbing Peter to pay Paul is that only the maintenance and operating budget is large enough to cover the high cost of asbestos abatement. Other budget categories such as teacher salaries and benefits, student activities, student transportation, insurance, food services, or health and attendance absolutely cannot be deferred. In most states, law and parental expectations demand those services or protections. Further, those categories are so small that they would have to be eliminated to pay for asbestos abatement. Finally, the need to abate friable asbestos comes during a time of massive education reform when teacher salaries are being raised and new funds are being put into purchasing new scientific equipment, computers, and more adequate textbooks. Therefore, available new dollars are being targeted and are not available for asbestos abatement. The law and the public which wants hazards removed from schools both demand action to abate friable asbestos, while at the same time demanding more excellence from schools. Thus, schools once again are caught between competing policy goals without enough assistance, to address all competing goals.

Question 6: Did the school districts receive any outside financial assistance for abatement of friable asbestos?

The simple answer to this question is, generally not. Of the 520 school districts that reported information on both the cost of abatement and answer this question, 484 (93.08 percent) received no outside assistance (Table 9). Only two of the 35 districts which reported receiving outside assistance for asbestos abatement reported any federal assistance. The federal assistance reported came from revenue-sharing, and the royalties that the federal government pays counties for timber cut on national forests within the county. The other 34 instances of outside assistance were from the state, the county, or the cities in which the school district was located. Although the response rate from all states was not large enough to make any judgments about the extent of state assistance, three of the four Florida school districts responding to the survey reported state assistance, and two of the three Maryland school districts responding to the survey reported state assistance with asbestos abatement.

Table 9

Source of Revenue for Asbestos Abatement

Outside Assistance	Yes	No	Total
Number	35	484	519
Percentage	6.74	93.26	100

Source of Assistance	Number	Percentage
State	33	94.29
Federal	2	5.71
	35	100.00

The original Hazardous Asbestos Abatement Act of 1980 had provided for no-interest loans, but Congress never appropriated funds for those loans. The new Hazardous Asbestos Abatement Act (Title 5 of P.L. 98-377 passed in 1984 provides for both grants and loans, and Congress appropriated $50 million for those purposes. Based on the AASA results, a good deal more than $50 million will be needed from local, state and federal sources, but for the most financially hard-pressed school districts, the assistance will be welcome.

Summary

the AASA survey done in the summer of 1984 reveals that schools are acting to identify hazardous asbestos (97.5 percent inspected). The inspections are largely done by outside consultants (44.13 percent), but state agencies (21.62 percent), local school districts (12.79 percent) and the EPA (9.88 percent) have also been active in the inspection of schools. Over one-half of the responding schools (62.11 percent) found friable asbestos. The EPA did a similar survey in the winter of 1984 and found that 54.27 percent of the schools contained friable asbestos. The difference is not large, and both surveys found that over one-half of the schools inspected found friable asbestos. The survey results also show that most schools that identified hazardous asbestos have already acted to abate the asbestos. Of the 767 schools with asbestos, 623 (81.12 percent) completed abatement, 60 (7.82 percent) had partially completed abatement, and ten others were in the process of abatement. Only 74 school districts (9.65 percent) reported having identified friable asbestos and not yet taking action to abate the asbestos.

The survey clearly identified a problem for schools that has not been dealt with by EPA: paying for asbestos abatement without harming the schools' instructional program. The 558 schools that reported cost of abatement information spent nearly $49 million to either remove or encapsulate friable asbestos, and only 27.51 percent had budgeted for the asbestos abatement. Thus, the expenditures were large (an average of $128,330 for removal and $22,703 for encapsulation) and unanticipated, so schools had to take funds from other activities such as school maintenance and operations. Further, very few school districts (5.71 percent) report receiving outside assistance for the unanticipated expenditures.

Thus, schools are acting to abate hazardous asbestos, but mainly on their own, with some state assistance and no directed federal assistance.

ASBESTOS SURVEY

The following survey is intended to provide AASA's Office of Governmental Relations with information regarding the issue of asbestos in public schools. Asbestos legislation is moving on Capitol Hill, and the Office of Governmental relations would appreciate your quick response. Please check the most appropriate responses to your district's current asbestos situation.

1. Has your system been inspected for asbestos-containing materials?
   Yes_____ No_____

2. How many, if any, buildings in your district have been identified as containing friable asbestos?
   Total number of buildings in system _____
   Number of buildings with friable asbestos _____

3. Who did the inspection of your district's school buildings?
   County Health Department _____
   City Health Department _____
   State Health Department _____
   State OSHA _____
   EPA _____
   Outside Consultant _____
   Other (Specific) _____

4. What steps, if any, have been taken to correct the asbestos situation?
   Removal _____
   Encapsulation _____
   Combination of removal/encapsulation _____
   No measures taken _____

5. If abatement has taken place, what was the approximate cost of removal? _____ of encapsulation? _____
   a. What was the source of funds for the cost of abatement?
   b. Was the amount budgeted in advance of the asbestos abatement?
      Yes _____ No _____
   c. Did your district receive any money from any outside agency to assist in the abatement? If so, please list sources.

Thank you in advance for your cooperation in addressing the asbestos issue.

Please return the questionnaire by June 6 to:

Office of Government Relations
AASA
1801 N. Moore Street
Arlington, VA 22209